SIEMENS

PATENT
Attorney Docket No. 2002P18325WOUS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Inventor:	M.-C. Fritsch et al.	)	Group Art Unit:	2611
		)		
Serial No.:	10/538,152	)	Confirmation no:	3257
		)		
Filed:	06/08/2005	)	Examiner:	SINGH, Hirdepal

Title: SYSTEM FOR THE GENERATION OF CODE

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Sir:

APPELLANTS' REPLY BRIEF UNDER 37 CFR 41.41

This reply brief is in response to Examiner's answer of 12/24/2009. This is not a substitute Appeal Brief. Any ground for rejection in Examiner's Answer that is not refuted herein is considered by Appellants to have been sufficiently argued in the Appeal Brief, such that no further comment is needed herein. Arguments herein focus on errors or changes in the rejections resulting from Examiner's answer.

Appellants' page, line, and paragraph numbers mentioned herein are relative to the substitute specification. Line counts do not include blank lines.

The following is a listing of three points raised by the Examiner starting on page 24, section 10, of the Examiner's Answer. The Appellant's reply to each of these points is provided below.

1. Predecessor/successor relationships (Examiner's Answer 10.C.I.)

Examiner asserts that since components of Burgess and others have connections with starting and ending points, Appellants' method is therefore inherent in configuring such starting and ending points.

2. Previously input plant structure and know-how (Examiner's Answer 10.C.II.)

Examiner asserts that existence of an input step in Sakurai meets aspects of the claimed invention. Examiner further asserts that Appellants' attempted amendment after final action constitutes an admission supporting the rejection.

3. Description in Drawing (Examiner's Answer 10.C.III.)

Examiner asserts that graphical displays and flow charts in Sakurai meet aspects of Appellants' drawing as claimed.

APPELLANT'S ARGUMENTS

The arguments below correspond by number to the Examiner's Answer points listed above

1. Predecessor/successor relationships (Examiner's Answer 10.C.I.)

Appellants respectfully argue that Examiner equates a result (connections) to a system and method for generating such a result. However, distinctions exist in the respective stages of generation of automation code, notwithstanding any similarity that may exist in the code produced. Burgess requires an expert user to order the component connections at the time of interconnecting the components, such as in his FIG 4. At this stage, his components can be connected incorrectly through human error, such as reversing the order of a connection. Appellant's system and method generates automation code on the basis of know-how previously input into the description, including predecessor/successor relationships that prevent this error. Each independent claim in the application recites generation of automation code on the basis of know-how previously input into the description.

2. Previously input plant structure and know-how (Examiner's Answer 10.C.II.)

In paragraph 10 of the final action of 05/29/2009, Examiner held the independent claims indefinite. He overcame this by interpreting the claims as the plant information related to layout is inputted in the system by the user. Appellants offered this interpretation in an amendment in order to overcome the rejection. However, Examiner denied entry, saying it changes the scope of the invention. He now asserts that the non-entered amendment is an admission by Appellant. Appellants feel that if an amendment is not entered because it changes the scope of the invention, it cannot then define the scope of the invention to support a rejection.

In any case, Examiner withdrew the 112 the rejection per Examiner's Answer 10.B. Appellants respectfully argue that the mere existence of a user input step in prior art does not teach the claimed invention. In Sakurai, automation code is built by an operator by selecting and combining software modules while adapting them by observing a read-out of the plant operation procedure (Sakurai col. 5, lines 30-41). This appears to be a labor-intensive and error prone method of code generation. In contrast, code generation is accomplished in Applicants' invention by "*a code generator that automatically generates automation code for the plant that controls information flows among the controllers based on the drawing and the control-relevant information of the description, wherein the automation code is generated on the basis of a structure of the plant and know-how, including the predecessor/successor relationships, previously input into the description.*" (claim 33, or similarly recited in independent claims 13 and 26)

3. Description in Drawing (Examiner's Answer 10.C.III.)

Sakurai's graphical displays are for the following main uses: 1) To monitor ordinary plant operation; 2) To display a plant operation procedure that visually guides an operator in entering information for the generation of a plant control program (col. 5 lines 34-42); 3) To display information input for the generation of a plant control program; and 4) To display a modification of a program (Sakurai col. 4 lines 18-22). None of these uses automatically generate automation code as claimed. Sakurai's definition of automatic code generation is

found in column 1 lines 33-37: *"regular programs frequently used are prepared in the form of modules and these program modules are coupled together to automatically provide necessary programs."* However, selecting and coupling of programs in Sakurai is done by manual data entry by an operator while observing a display of plant operation procedure (col. 5 lines 34-42).

Respectfully submitted,

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